

## CLAIMS

1. A method of providing a product, the method comprising:
  - providing a means having an absorption coefficient,  $\mu_a$ , and a scattering  
5 coefficient,  $\mu_s$ , at a predetermined wavelength, wherein  $\mu_s > (1/10) * \mu_a$ ,
  - providing radiation comprising radiation at the predetermined wavelength to a  
predetermined volume at or near an interface or surface of the means.
2. A method according to claim 1, wherein the step of providing the means comprises  
providing the means with a predetermined substance at the interface and/or in the  
10 predetermined volume and wherein the step of providing the radiation comprises the  
substance absorbing radiation at the predetermined wavelength and converting the radiation  
to heat in the means.
3. A method according to claim 2, further comprising the step of providing a second means  
adjacent to and abutting the interface, the second means having an absorption coefficient  
15  $\mu_{a2}$  and a scattering coefficient  $\mu_{s2}$  at the predetermined wavelength.
4. A method according to claim 3, wherein the step of providing the second means comprises  
providing a second means with  $\mu_{a2} < \mu_a$  and wherein the step of providing the radiation  
comprises providing the radiation to the predetermined volume through the second means.
5. A method according to claim 3, wherein the step of providing the second means comprises  
20 providing a second means with  $\mu_{s2} > (1/10) * \mu_a$  and wherein the step of providing the  
radiation comprises providing the radiation to the predetermined volume along a plane of the  
interface.
6. A method according to claim 3, wherein the step of providing the radiation comprises  
melting the means in the predetermined volume so as to weld the means and the second  
25 means to each other.
7. A method according to claim 3, the method comprising the further step of providing a heat  
activatable adhesive at the interface between the means and the second means, and wherein

the step of providing the radiation comprises heating the adhesive so as to attach the means to the second means.

8. A method according to claim 3, wherein the step of providing the second means comprises providing the second means attached to the means, and wherein the step of providing the radiation comprises heating the predetermined volume so as to melt material in the predetermined volume and at the interface in order to facilitate detachment of the means from the second means.

9. A method according to claim 2, wherein the step of providing the radiation comprises evaporating and removing part of the means.

10. A method according to claim 2, wherein the step of providing the means comprises providing the means with a substance in the predetermined area and/or on the interface thereof, the substance being adapted to perform an endothermic reaction during the step of providing the radiation.

11. A method according to claim 1, wherein the step of providing the means comprises providing the means with a substance in the predetermined area and/or on the interface thereof, and wherein the step of providing the radiation comprises the substance absorbing the radiation at the predetermined wavelength and changing a colour of the substance or means.

12. A method according to claim 1, wherein the step of providing the radiation comprises the means absorbing radiation and changing a surface characteristic thereof at the interface.

13. A method according to claim 1, wherein the step of providing the radiation comprises a polymer of the means absorbing the radiation at the predetermined wavelength and changing a characteristic thereof.

14. A method according to claim 1, wherein the means is a homogeneous material having at least substantially the same  $\mu_a$  and  $\mu_s$  throughout the means.

15. A method according to claim 1, wherein the step of providing the means comprises providing a means comprising an upper layer having the absorption coefficient  $\mu_a$  and a lower layer having the scattering coefficient,  $\mu_s$ .

16. A method according to claim 15, wherein the step of providing the means comprises providing the means with the upper layer comprising a substance adapted to convert absorbed radiation to heat.

17. A method according to claim 15, wherein the step of providing the radiation comprises  
5 photo activating a substance in the upper layer.

18. A method according to claim 1, wherein the step of providing the means comprises providing the means with a predetermined concentration or percentage of a particulate matter having a mean particle size of less than 10 times the predetermined wavelength.

19. A radiation welded product comprising a first part and a second part welded together,  
10 wherein:

- the first part has a high transmission at the predetermined wavelength and
- the second part has an absorption coefficient,  $\mu_a$ , and a scattering coefficient,  $\mu_s$ , at the predetermined wavelength,

wherein  $\mu_s > (1/10) * \mu_a$ .

20. A radiation welded product comprising a first part and a second part welded together,  
15 wherein:

- the first part has a high transmission at the predetermined wavelength,
- the second part has an absorption coefficient,  $\mu_a$ , at the predetermined wavelength, and
- 20 - the second part has a scattering coefficient,  $\mu_s$ , at the predetermined wavelength,

wherein  $\mu_s > 0.4 \text{ mm}^{-1}$  and  $\mu_a < 4 \text{ mm}^{-1}$ .

21. A radiation welded product according to any of claims 19 or 20, wherein:

- the first part further has a first scattering coefficient,  $\mu_{s1}$ , at the  
25 predetermined wavelength, and
- the second part has an upper part adjacent to the first part and a lower part,  
wherein:
  - the upper part having the absorption coefficient,  $\mu_a$ , and the lower

part having a third, respectively, absorption coefficient,  $\mu_a3$ , at the predetermined wavelength, the absorption coefficient,  $\mu_a$ , being larger than the first and third absorption coefficients,  $\mu_a1$  and  $\mu_a3$ , respectively, and

- the lower part has the scattering coefficient,  $\mu_s$ , at the predetermined wavelength, the scattering coefficient,  $\mu_s$ , being higher than the first scattering coefficient,  $\mu_s1$ .

22. A product according to claim 19, wherein the second part comprises a predetermined concentration of a material having a mean particle size of at the most 10 times the predetermined wavelength.

- 23. A method of providing an adhesive element comprising an upper part and a lower part, the upper part being a layer of a pressure sensitive adhesive composition provided on a surface of the lower part, wherein the upper part has an absorption coefficient,  $\mu_a$ , at a predetermined wavelength, and the lower part has a scattering coefficient,  $\mu_s$ , at the predetermined wavelength, wherein  $\mu_s > (1/10) * \mu_a$ , the method comprising:

- providing radiation to a first area of the upper part so as to provide a predetermined property of the adhesive in the first area.

24. A method according to claim 23, wherein the radiation is provided only to the first area.

- 25. A method according to claim 23, wherein the lower part comprises, in a volume provided below and corresponding to the first area, the scattering coefficient  $\mu_s$ , a scattering coefficient of the remainder of the lower part having a scattering coefficient,  $\mu_s2$ , which is lower than  $\mu_s$ , wherein radiation is provided to an area of the adhesive exceeding the first area.

26. A method according to claim 23, wherein  $\mu_s > 0.4 \text{ mm}^{-1}$  and  $\mu_a < 4 \text{ mm}^{-1}$ .

27. An ostomy product provided by the method of claim 1.

- 28. An ostomy product comprising the product according to claim 19.

29. A radiation welded product according to claim 20, wherein:

- the first part further has a first scattering coefficient,  $\mu_s1$ , at the predetermined wavelength, and

- the second part has an upper part adjacent to the first part and a lower part, wherein:

- the upper part having the absorption coefficient,  $\mu_a$ , and the lower part having a third, respectively, absorption coefficient,  $\mu_{a3}$ , at the predetermined wavelength, the absorption coefficient,  $\mu_a$ , being larger than the first and third absorption coefficients,  $\mu_{a1}$  and  $\mu_{a3}$ , respectively, and
- the lower part has the scattering coefficient,  $\mu_s$ , at the predetermined wavelength, the scattering coefficient,  $\mu_s$ , being higher than the first scattering coefficient,  $\mu_{s1}$ .

10 30. An ostomy product provided by the method of claim 23.